

WHAT IS CLAIMED AS NEW AND DESIRED TO BE PROTECTED BY  
LETTERS PATENT OF THE UNITED STATES OF AMERICA, IS:

1. An insulation plate for securing an underlying environmental membrane, having a release sheet removably disposed upon the external surface portion thereof, to an underlying substructure, comprising:

5           an insulation plate having an external peripheral edge portion;

              an aperture defined within a central portion of said plate for receiving a fastener for securing said insulation plate to an underlying substructure; and

10          a plurality of teeth disposed upon said external peripheral edge portion of said insulation plate for cutting the release sheet of the underlying environmental membrane when said plurality of teeth engage the release sheet of the underlying environmental membrane so as to facilitate the severing of the release sheet of the underlying environmental membrane along a locus substantially defined by means of said peripheral edge portion of said insulation plate.

20

2. The insulation plate as set forth in Claim 1, wherein:  
              said insulation plate has a circular configuration.

25

3. The insulation plate as set forth in Claim 1, wherein:

---

      said plurality of teeth are disposed within a continuous array upon said peripheral edge portion of said insulation plate.

5

4. The insulation plate as set forth in Claim 3, wherein:  
      said continuous array upon said peripheral edge portion of said insulation plate comprises an array of serrated teeth.  
10

5. The insulation plate as set forth in Claim 1, wherein:  
15       said plurality of teeth project radially outwardly from said external peripheral edge portion of said insulation plate such that when the release sheet of the underlying environmental membrane is brought into engagement with said plurality of radially outwardly projecting teeth, said plurality of radially outwardly projecting teeth will sever  
20       the release sheet of the underlying environmental membrane along said locus substantially defined by means of said peripheral edge portion of said insulation plate.

25

6. The insulation plate as set forth in Claim 1, wherein:  
      said plurality of teeth project axially downwardly from said external peripheral edge portion of said insulation plate such that when said insulation plate is rotated  
30       while said insulation plate is being fixedly secured to the

---

underlying substructure, said plurality of axially down-  
wardly projecting teeth will sever the release sheet of the  
underlying environmental membrane along said locus substan-  
tially defined by means of said peripheral edge portion of  
5 said insulation plate.

7. The insulation plate as set forth in Claim 5, wherein:  
10 each one of said plurality of teeth has the con-  
figuration of an isosceles triangle, a tooth depth, as mea-  
sured between root and crest portions of each one of said  
plurality of teeth, of approximately 0.030 inches, the  
pitch, as defined between successive crest portions of ad-  
15 jacent ones of said plurality of teeth, being approximately  
0.046 inches, and an included angle, as defined between the  
equal sides of said isosceles triangle, of approximately  
60°.

20

8. The insulation plate as set forth in Claim 6, wherein:  
each one of said plurality of teeth has the con-  
figuration of an isosceles triangle, and a tooth depth, as  
25 measured between root and crest portions of each one of said  
plurality of teeth, of approximately 0.015 inches.

30 9. An insulation plate for securing an underlying environ-  
mental membrane to an underlying roof decking substructure,

comprising:

an insulation plate having an external peripheral edge portion;

an aperture defined within a central portion of  
5 said insulation plate for receiving a fastener for securing  
said insulation plate to an underlying roof decking sub-  
structure; and

a plurality of teeth disposed upon said external  
peripheral edge portion of said insulation plate for engag-  
10 ing the underlying environmental membrane when said insula-  
tion plate is secured to the underlying roof decking sub-  
structure so as to facilitate the gripping of the underlying  
environmental membrane by said plurality of teeth of said  
insulation plate in order to positively assist the resist-  
15 ance of uplifting wind forces.

10. The insulation plate as set forth in Claim 9, wherein:

20 said insulation plate has a circular configura-  
tion.

25 11. The insulation plate as set forth in Claim 9, wherein:

said plurality of teeth are disposed within a con-  
tinuous array upon said peripheral edge portion of said in-  
sulation plate.

---

12. The insulation plate as set forth in Claim 11, wherein:  
said continuous array upon said peripheral edge  
portion of said insulation plate comprises an array of ser-  
rated teeth.

5

13. The insulation plate as set forth in Claim 9, wherein:  
said plurality of teeth project radially outwardly  
10 from said external peripheral edge portion of said insula-  
tion plate.

15 14. The insulation plate as set forth in Claim 9, wherein:  
said plurality of teeth project axially downwardly  
from said external peripheral edge portion of said insula-  
tion plate.

20

15. The insulation plate as set forth in Claim 13, wherein:  
each one of said plurality of teeth has the con-  
figuration of an isosceles triangle, a tooth depth, as mea-  
25 sured between root and crest portions of each one of said  
plurality of teeth, of approximately 0.030 inches, the  
pitch, as defined between successive crest portions of ad-  
jacent ones of said plurality of teeth, being approximately  
0.046 inches, and an included angle, as defined between the  
30 equal sides of said isosceles triangle, of approximately  
60°.

16. The insulation plate as set forth in Claim 14, wherein:  
each one of said plurality of teeth has the configuration of an isosceles triangle, and a tooth depth, as measured between root and crest portions of each one of said 5 plurality of teeth, of approximately 0.015 inches.

17. A fully-adhered roof decking assembly, comprising:  
10           a roof decking member;  
              a layer of insulation disposed atop said roof decking member;  
              a first underlying environmental membrane having a first internal surface portion thereof disposed atop said 15 layer of insulation, having an adhesive layer disposed upon a second external surface portion thereof, and having a release sheet removably disposed atop said adhesive layer;  
              a second overlying environmental membrane adhered to said adhesive layer of said first underlying environmental 20 membrane after said release sheet has been removed from said adhesive layer of said first underlying membrane; and  
              an insulation plate for securing said first underlying environmental membrane to said roof decking member,  
              said insulation plate having an external peripheral edge portion; an aperture defined within a central portion of said insulation plate for receiving a fastener for securing said insulation plate to said roof decking member; and a plurality of teeth disposed upon said external peripheral edge portion of said insulation plate for cutting said 25 release sheet of said first underlying environmental membrane when said plurality of teeth engage said release sheet  
30

---

of said first underlying environmental membrane so as to facilitate the severing and removing of said release sheet from said first underlying environmental membrane, along a locus substantially defined by means of said peripheral edge 5 portion of said insulation plate, in preparation for adherence of said second overlying environmental membrane to said adhesive layer of said first underlying environmental membrane.

10

18. The roof decking assembly as set forth in Claim 17, wherein:

15       said insulation plate has a circular configura-  
tion.

19. The roof decking assembly as set forth in Claim 17, 20 wherein:

      said plurality of teeth are disposed within a continuous array upon said peripheral edge portion of said insulation plate.

25

20. The roof decking assembly as set forth in Claim 19, wherein:

30       said continuous array upon said peripheral edge portion of said insulation plate comprises an array of serrated teeth.

21. The roof decking assembly as set forth in Claim 17,  
wherein:

said plurality of teeth project radially outwardly  
from said external peripheral edge portion of said insula-  
5 tion plate such that when said release sheet of said first  
underlying environmental membrane is brought into engagement  
with said plurality of radially outwardly projecting teeth,  
said plurality of radially outwardly projecting teeth will  
sever said release sheet of said first underlying environ-  
10 mental membrane along said locus substantially defined by  
means of said peripheral edge portion of said insulation  
plate.

15

22. The roof decking assembly as set forth in Claim 17,  
wherein:

said plurality of teeth project axially downwardly  
from said external peripheral edge portion of said insula-  
20 tion plate such that when said insulation plate is rotated  
while said insulation plate is being fixedly secured to said  
roof decking member, said plurality of axially downwardly  
projecting teeth will sever said release sheet of said first  
underlying environmental membrane along said locus substan-  
25 tially defined by means of said peripheral edge portion of  
said insulation plate.

30 23. A roof decking assembly, comprising:  
a roof decking member;

a layer of insulation disposed atop said roof decking member;

an underlying environmental membrane disposed atop said layer of insulation; and

5 an insulation plate for securing said underlying environmental membrane to said roof decking member,

said insulation plate having an external peripheral edge portion; an aperture defined within a central portion of said plate for receiving a fastener for securing 10 said insulation plate to said roof decking member; and a plurality of teeth disposed upon said external peripheral edge portion of said insulation plate for engaging said underlying environmental membrane when said insulation plate is secured to said roof decking member so as to facilitate 15 the gripping of said underlying environmental membrane by said plurality of teeth of said insulation plate in order to positively assist the resistance of uplifting wind forces.

20

24. The roof decking assembly as set forth in Claim 23, wherein:

said insulation plate has a circular configuration.

25

25. The roof decking assembly as set forth in Claim 23, wherein:

30 said plurality of teeth are disposed within a continuous array upon said peripheral edge portion of said in-

sulation plate.

5       26. The roof decking assembly as set forth in Claim 25,  
wherein:

                said continuous array upon said peripheral edge  
portion of said insulation plate comprises an array of ser-  
rated teeth.

10

27. The roof decking assembly as set forth in Claim 23,  
wherein:

15        said plurality of teeth project radially outwardly  
from said external peripheral edge portion of said insula-  
tion plate.

20

28. The roof decking assembly as set forth in Claim 23,  
wherein:

                said plurality of teeth project axially downwardly  
from said external peripheral edge portion of said insula-  
25      tion plate.

29. A method of forming a fully-adhered roof decking assem-  
30      bly, comprising the steps of:

                providing a roof decking member;

positioning a layer of insulation atop said roof decking member;

positioning a first underlying environmental membrane atop said layer of insulation such that an adhesive 5 layer of said first underlying environmental membrane, covered by a removable release sheet, is externally disposed;

positioning an insulation plate, having an external peripheral edge portion, an aperture defined within a central portion of said insulation plate for receiving a 10 fastener, and a plurality of teeth disposed upon said external peripheral edge portion of said insulation plate, over said first underlying environmental membrane;

securing said insulation plate to said roof decking member by inserting said fastener through said aperture 15 of said insulation plate and into said roof decking member;

peeling a portion of said removable release sheet away from said first underlying environmental membrane, so as to expose said adhesive layer of said first underlying environmental membrane, and moving said peeled portion of 20 said removable release sheet into engagement with said plurality of teeth disposed upon said external peripheral edge portion of said insulation plate such that said plurality of teeth disposed upon said external peripheral edge portion of said insulation plate can cut said release sheet along a locus substantially defined by means of said peripheral edge 25 portion of said insulation plate so as to facilitate the removal of said release sheet from said first underlying environmental membrane; and

adhering a second overlying environmental membrane 30 onto said exposed adhesive layer of said first underlying environmental membrane after said release sheet has been re-

moved from said adhesive layer of said first underlying membrane.

5

10

15

20

25

30